Re: Cantor's definition of set

Source: http://sci.tech−archive.net/Archive/sci.logic/2007−10/msg00934.html

- *From*: John Jones <jonescardiff@xxxxxxx>
- *Date*: Sat, 27 Oct 2007 02:52:17 −0700

On Oct 26, 10:58?pm, MoeBlee <jazzm...@xxxxxxxxxxx> wrote:

> On Oct 26, 2:45 pm, John Jones <jonescard...@xxxxxxx> wrote:
>
> > On Oct 26, 9:37?pm, MoeBlee <jazzm...@xxxxxxxxxxx> wrote:
> >
> > > On Oct 26, 1:29 pm, John Jones <jonescard...@xxxxxxx> wrote:
> > >
> > > > On Oct 26, 2:59?am, G. Frege <nomail@invalid> wrote:
> > > > 1,2,3,4,5... is often portrayed as numbers. But aren't they examples of the signs we use to portray numbers, and aren't these signs simply arranged in a sequence and not numbers after all? For I cannot use 1,2,3,4 ... mathematically. 1,2,3,4 ... does not occur in any mathematical calculation. I can find 1, and 2 and 3 and 4 in a calculation, but in finding them don't I merely find the signs and not the numbers themselves? What I am saying is, you can't pull a number out of the application that generates it. It would seem, if this is true, that a set of numbers is an impossibility.

'2' is a numeral. 2 is a number.

I don't see your difficulty with this.

> The second major problem which simply won't go away, is this: A set is the concept of a particular collection or group.

Maybe you should distinguish between whether it's a concept of a collection or whether it IS the collection.

> At least I have seen a set described as either a collection or a group. Now a collection does not support sequence: in fact if a collection could be a sequence, it would be a sequence and not a collection.

No, that just doesn't follow. A sequence is a certain KIND of set.
There's no conflict in a set being of a certain KIND.

> Don't get me wrong here. I can have a set of sequences, but the the set itself, on its own merits, cannot support a sequence. I must establish the presence of a sequence independently of its membership in a set.

I dont' see any reason we MUST do that. We prove that f is a sequence by proving that it has the property mentioned in the definition of

'sequence', and that definition ultimately reverts to the sole primitive 'e'.

This,
I advance, is another reason why I cannot have a set of numbers.
Numbers in a collection are like numerals in a sack, like lottery 'numbers'

I don't envy you the knots you've tied yourself in.

MoeBlee

'2' is a numeral. 2 is a number.

The number 2 is always generated by an application, so I cannot propose simply 2. I cannot say 2 is a number and leave it at that. I must specify, and not simply assume, an application that generates it.

Even if numbers existed in a third Platonic realm as stand−alone real entities, I would not be able to recognise them as numbers except by employing an application, like counting. But in that case, I make numbers myself. So there is no Platonic realm of numbers.

It seems to me that your requirements as to applications and all the rest is a terrible weight of baggage that is not allowing you to even walk around to enjoy the ordinary sights and sounds.

A sequence is a certain KIND of set.
There's no conflict in a set being of a certain KIND.

> A sequence and a collection are mutually exclusive I would have thought − a collection is indifferent to order. 'A collection of coins of increasing denomination' does not establish a relationship between 'collection' and a sequenced 'increase'. The collection of coins would be quite indifferent as to coin order.−

> But a sequence is a certain kind of set that "codes" the order. There's no conflict in that.
>
> MoeBlee− Hide quoted text −
>
> − Show quoted text −

−−−−

> It seems to me that your requirements as to applications and all the rest is a terrible weight of baggage that is not allowing you to even walk around to enjoy the ordinary sights and sounds.

I understand the demands made by this particular enjoyment, even my own enjoyment lies a little to the side of it.

> But a sequence is a certain kind of set that "codes" the order. There's no conflict in that.

In that case, the set should incorporate that code in the name of the set. So instead of saying 'a set of numbers', I should also include in the name of the set the application for generating numbers. But in that case, I simply have an application.

More to the point, isn't a set just a name? and doesn't the name of the set desrcibe the set precisely? A set isn't a formula.

.